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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/931,193	08/15/2001	Masato Katayama	HIR-139	1385

48388 7590 06/04/2007
LORUSSO & ASSOCIATES
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PEASE INTERNATIONAL TRADEPORT
PORTSMOUTH, NH 03801

EXAMINER

PRYOR, ALTON NATHANIEL

ART UNIT	PAPER NUMBER
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1616

MAIL DATE	DELIVERY MODE
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06/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/931,193

Applicant(s)

KATAYAMA ET AL.

Examiner

Alton N. Pryor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-11, 13, 15-18 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8, 10, 13, 21 and 22 is/are allowed.
- 6) ☒ Claim(s) 5-7, 9, 11, 15-18, 20, 23 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claims 5,6,9,11,15-18,20,23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama (Bioscience, Biotechnology, and Biochemistry, Department, 2000, 64(4) 808-15). Katayama teaches a method of applying 4-chloroindole-3-acetic acid to cuttings in order to promote root growth. It is inherent that the 4-Cl-IAA would be administered to the cuttings in a carrier (solvent). See abstract.

Katayama teaches all that is recited in the claims except for the invention comprising the instant amount of 4-Cl-IAA and an automated sprinkling system or sprayer. One having ordinary skill in the art would have been motivated to determine the optimum concentration of 4-Cl-IAA. One would have been expected to do that in order to make the most effective invention for promoting root growth of rootless plant cuttings. With respect to the delivery of the composition as a spray, the prior art uses various methods to deliver chemicals to plant cuttings including the spraying.

Response to Applicants' Arguments

Applicants point out that Katayama's work does not involve application of the 4-Cl-IAA compound to leaf cuttings. Examiner agrees with Applicant and withdraws this rejection.

Claims 5-7,9,11,15-18,20,23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmad et al (Physiologia Plantarum, 1987, 69(1), 137-40) Ahmad teaches a method of applying a 10⁻⁶ molar solution of 4-chloroindole-3-acetic acid (4-Cl-IAA) to pea cuttings (shoot, leaf) in order to promote root growth. The molar concentration makes it obvious that the solvent is water since no other solvent is specifically named in the reference. See entire reference. Ahmad teaches all that is recited in the claims except for the invention comprising spreading agents, plant growth regulators, water, alcohol, and plant growth regulators and 4-Cl-IAA being applied using a sprayer or an automated sprinkling system. It would have been obvious to use an alcohol or organic compound such as methanol or a combination of methanol and water as the solvent in place of water. One would have been motivated to do this since methanol and water only differ in "H" versus "CH₃". Compounds differing in this way have similar chemical and physical properties and therefore are expected to yield a similar result when employed in an identical application. The term "plant growth regulators" is so broad such that 4-Cl-IAA and water would fit the definition since both can be used to aid in the control of plant growth. The term "spreading agents" is so broad such that water would fit the definition since levels of water in a chemical composition affects the viscosity of the composition that affects how well a composition

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spreads. With respect to the delivery of the composition as a spray or by using a sprinkling system, it is not demonstrated how dipping versus spraying leads to a different or unexpected result with respect to the growth of the root.

Response to Applicants' Argument

Applicants argue that Ahmad does not teach a system using a sprayer, or applying 4-Cl-IAA or any root-inducing compound, to the shoot or leaf of the pea cutting. Ahmad clearly discloses dipping rootless cuttings (basal Leafy cuttings) in a solution containing the root-inducing compound. Since Ahmad does not teach applying the root inducing compound by spraying the cuttings, it does not teach all elements of the claims. One of ordinary skill in the art would not be aware that the application of the solution comprising a root-inducing agent to the leaf of a rootless cutting would be effective in promoting root growth.

Examiner argues that as stated by the applicants, Ahmad discloses dipping rootless cuttings in a solution containing root inducing compounds such as 4-Cl-IAA. Ahmad identifies the cutting as being "Leafy cuttings". It obvious that the dipping of the "Leafy cuttings" into a solution containing a root inducing compound involves the application of the root inducing compound onto the surface of the leave – even basal application involves contacting the leaf surface with the root inducing compound. While it is true that Ahmad does not teach application of the root inducing compound by spraying, the Applicants have not shown how dipping versus spraying leads to a different or unexpected result. With respect to one of ordinary skill in the art being unaware that applying the root inducing compound containing solution to the leaf of a

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rootless cutting would be effective in promoting root growth, the Examiner finds this statement unconvincing since Ahmad makes it clear that the root inducing compound is applied to "Leafy cuttings" to promote root growth. See abstract.

Allowable Subject Matter

Claims 8,10,13,21 and 22 are allowable. The prior art does not teach or suggest the instant invention comprising polyoxyethylenealkyl phenyl ether, xylene, nonyl phenyl ether or sodium dodecylbenzenesulfonate.

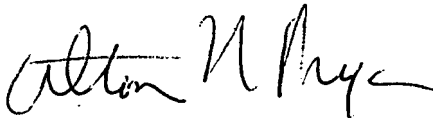
Telephonic Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alton N. Pryor whose telephone number is 571-272-0621. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Alton Pryor', with a stylized flourish at the end.

Alton Pryor
Primary Examiner
AU 1616